A Bridge Between East and West: Frank Lloyd Wright's Drawing as Synthesis of Two Different Cultures

Rachele Angela Bernardello
Cosimo Monteleone

Abstract

Since Frank Lloyd Wright's architectural drawings were made by different hands over 70 years, their unitary style is an extraordinary feature, and certainly not accidental. This paper attempts to articulate how the American master conceived drawings with the aim to surpass established traditions of architectural representation. The questions we try to answer are: What geometries did Wright employ? What system of projection did he use? What techniques of representation did he draw from? Even more important: how and why did he melt East and West traditions of representation to create a personal graphic style?

Parole chiave
Frank Lloyd Wright, architectural drawing, Japanese prints, Descriptive Geometry

Topic
Communicating

doi.org/10.3280/oa-832-c16

Architectural Drawings as Bridge Between Different Cultures

In the years since his death Frank Lloyd Wright has been carefully studied by critics. His work thus rose to international prominence as a paragon of cutting-edge architecture, becoming a symbol of an entire nation, the United States, which, between the end of XIX and the beginning of XX centuries, was looking for a new identity, independent of the European culture [Riley, Reed 1994, pp. 13-17]. This paper goes deeply into a historical overview of Wright's architectural drawings, a specific production that is complementary to his better-known designs [1]. Looking at the original drawings it becomes clear that Wright's corpus of architectural drawings remained stylistically consistent over the course of 70 years, even if it was performed by several different hands, those of his apprentices [Byrne 1963, pp. 109-112]. Although the draftsmen were many, it is hardly necessary to seek the advice of an expert to recognize one of Wright's drawing among the drawings of other architects. This credit is not only attributable to his characteristic way of designing but it can also be connected to what has been recognized as Wright's typical graphic style. Bruce Brooks Pfeiffer related with authority that Wright used to set a drawing, letting the apprentices do a fair draft copy to which he added at the end a final personal touch [Pfeiffer 2009, p. 125]. So, since the drawings were made by different hands over 70 years, the unitary aspect of Wright's graphic corpus is an extraordinary feature, and certainly not accidental. If the architect personally ensured that the renderings of his projects had key feature in common, we argue that this steady attention was a sign of a specific communicative commitment that aimed to convey the image of a new and modern America. In particular, Wright's specific graphic style comes from the mixture of two different traditions of architectural representation: Eastern and Western ones.
If some links between the former and Wright's drawings have already been investigated by scholars [Nute 2000], the latter has almost been neglected, as has been the relation between the two traditions. We would like to demonstrate that a correct analysis of Wright's architectural drawings should consider the influence of both traditions. Moreover, a deliberate decision of merging two opposing traditions appears particularly interesting especially if we consider the historical context.
Democracy, inclusion, freedom and modernity are concepts rooted in American culture that flourished just as Frank Lloyd Wright began his career. Indeed, between the late XIX and early XX centuries, every key feature of American culture was promoted and disseminated by literature, art, philosophy, and politics. Any artistic expression of the Country, including architecture, attempted to portray the mutated ideals of the Americans based on big cities. For instance, this was the aim of the American Realism, which showed a new way of interpreting the more urban than rural American life. American Realism tried to establish a very deep change of culture; it was certainly a pluralistic one, but it could belong only to America. Indeed, the categorical imperative by which all the members of this artistic movement had to abide was to emphasize every uniquely American cultural aspect.
Following same ideals throughout the decades of the twentieth century, Frank Lloyd Wright re-conceived almost every facet of the American home in the effort to construct modern residential environments that would both foster the conventional rituals of domestic life and accommodate new habits and conveniences. One of his first steps was to promote his design using architectural drawings, as in the case of the *Ladies' Home Journal* [2] and *Wasmuth Portfolio* [3]. These drawings were not just an advertising medium, their final purpose had also historical, artistic, and social aims. The American master was aware and proud of having revolutionized the modern way of designing architecture and, of course, he had achieved this by deriving his technical approach from his specific knowledge and experience. Starting from the same knowledge and experience, he performed a new graphic architectural style: Kindergarten gift and applications as well as Ruskin's writings on drawing laid the foundation of Wright's graphic prowess [Brunetti 1980]. German Idealism and American Transcendentalism made the Master aware of his genius and led to a re-evaluation of Nature, in particular as a defining feature of the United States [Emerson 1836]. But he drew above all on Descriptive Geometry and Japanese prints that provided the tools and methods to compose new original images. He conceived drawings that synthesize and surpass the traditions of architectural representation,

mixing the rules of plan, elevation, and perspective (Western tradition) with the depiction of buildings and space in Japanese prints (Eastern tradition). The way Frank Lloyd Wright represents his design revived key concepts that embraced new terms of democracy, more closely tied to the changing conditions created by the American Civil War and the abolition of slavery. A deep investigation of American culture and art, between the late XIX and early XX centuries, could better clarify how Wright's architectural drawings fit into the concept of democracy. The idea of blending these two cultures together to create a new and better one was not new in the United States. Around 1870 some American academics went to Japan to spread Western culture in the new government schools. Among them was Ernest Francisco Fenollosa, who taught at the Tokyo Imperial University and, after returning to the United States, from 1890 onwards, promoted the universal aesthetic ideals exemplified by Far Eastern pictorial art. Fenollosa had a conciliatory position between the opposing cultures [Fenollosa 1893]; indeed, he promoted a conscious mix of Western and Eastern ideals as a means of increasing the level of human civilization. According to Fenollosa, only in the USA could Western and Eastern cultures merge and improve thanks to an exchange of values. Wright was acquainted with Fenollosa's writings and probably met him personally during his apprenticeship in the Chicago studio of the architect Silsbee, who was cousin of the famous orientalist [Nute 2000, p. 22]. Wright's renderings admirably mix the most common methods of representation of these two opposite cultures: his architectural drawings were realized in accordance with the geometric rules of linear perspective of the Western tradition but at the same time his drawings jump from scale to scale and are enriched by trees and like in Japanese prints.

Melting Different Traditions of Representation

When Frank Lloyd Wright was in his twenties he studied civil engineering for two years in Madison, Wisconsin, and took an exam of Descriptive Geometry [Hines 1967, pp. 227-233]. There is some hard evidence that demonstrates the mastery achieved by the *American architect in Monge's method, such as a drawing made during these years entitled Shade and Shadows of a Surface of Revolution Generated by the Revolution of a Parabola about its Axis*. t is a very complex exercise of Descriptive Geometry performed with the help of tangent spheres. 2D and 3D reconstructions of this exercise superimposed on the original drawing show that Wright did his homework correctly (fig. 01).

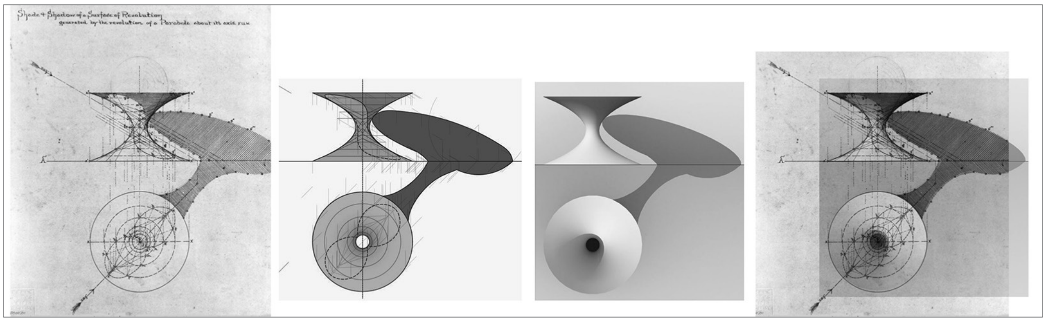


Fig. 01 – Wright's exercise of Descriptive Geometry (1885) and digital analysis (C. Monteleone).

From this analysis it emerges that academic studies expanded and strengthened the theoretical-geometric knowledge already acquired by Wright when he was a boy by practicing at the Kindergarten table [Rubin 2002].
Descriptive Geometry provided Wright with the tools needed to reduce the complexity of space to a few principles. The application of this geometric science made the design of his architectural project simpler and more direct, solving the space problems through graphic constructions capable of supporting the power of his extraordinary imagination.

We cannot doubt that academic knowledge helped Wright in giving first graphic and then physical shape to his projects.
This is even more true comparing the outcomes of a digital analysis of the surfaces that compose the Archesum, the exhibition hall of the Guggenheim Museum, a space entirely defined by the assembly of conical surfaces, right and inclined helicoids (fig. 02).

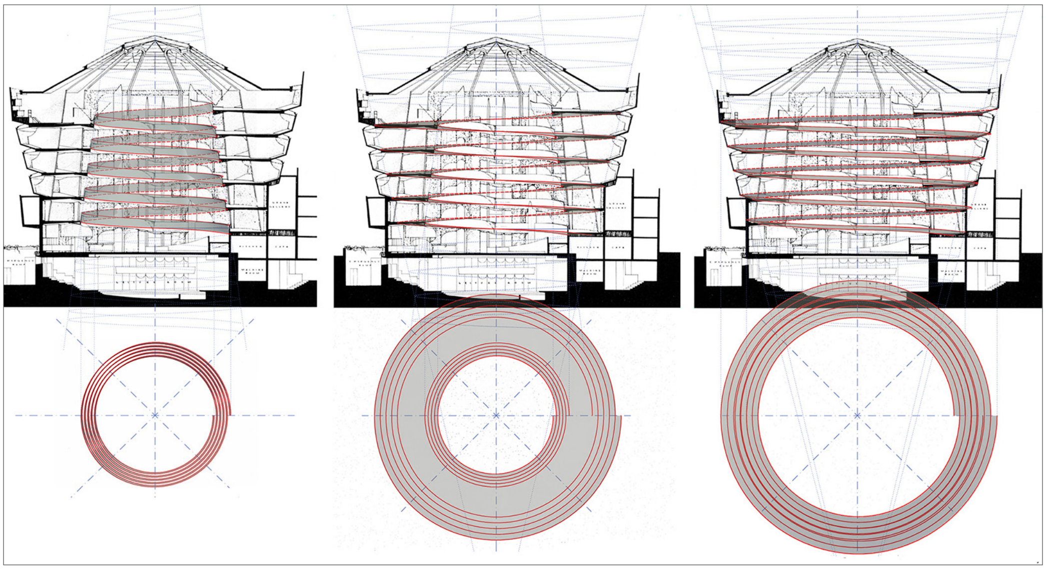


Fig. 02. Conical surfaces, right and inclined helicoids in the Guggenheim Museum (C. Monteleone).

To clarify Wright's debt to Descriptive Geometry let's take a closer look at a drawing that represents the Doheny Ranch Project (1922) in Los Angeles. Contrary to scholars' claims this drawing is not a perspective, at least not in the sense of Western tradition. Only a few buildings on the right lower corner follow the rules of linear perspective, while the other buildings, roads and landscape are depicted as simple elevations. The sense of depth is expressed only by the different scales of representation, since elevations become increasingly smaller as they move away from the ideal standpoint of the observer. This jump in scale of architecture refers to the graphic charm radiated by the Japanese prints. But for the Doheny Ranch Project Wright also performed classical perspectives and these drawings have to be linked to Western tradition (g. 03), since his linear perspective construction is based on the deformed plan placed below. In these cases, a digital analysis help to reconstruct virtually the perspectival process, emerging that Wright's strategy is very similar to the perspectival exercises of the teaching books, adopted by academics in the American universities [Church 1865] (fig. 04). Many scholars have wondered how deeply Wright's design was inspired by Japanese architecture, whose influence had been noticed even before 1905, when Robert Spencer Jr. (1865-1953), one of Wright's colleagues of the Chicago years, raised the question in a writing of *Architectural Review* [Spencer 1900, p. 69]. On the contrary, only a few scholars have extended their studies comparing Wright's architectural drawings to Japanese prints. But, given Wright's complex and heterogeneous background, it would be very interesting to analyze his graphic corpus, evaluating how Wright used to compose his renderings by mixing together Western and Eastern traditions of representation. For instance, let's consider a rendering performed for the Guggenheim Museum. Applying the rules of perspective, two interesting facts emerge. the horizon line is arranged at eye level and the observer is located more or less at the intersection of Fifth Avenue and 89th Street. The *silhouette* of the cars suggests that the observer is on the opposite sidewalk. But our virtual reconstruction shows that the observer is within Central Park from where the museum would be hidden by trees. From these considerations we deduce that this rendering was set within a virtual geometric space that does not correspond to reality. This drawing for the museum is not only affected by Western perspective, since it can also be reinterpreted in the light of Japanese art.

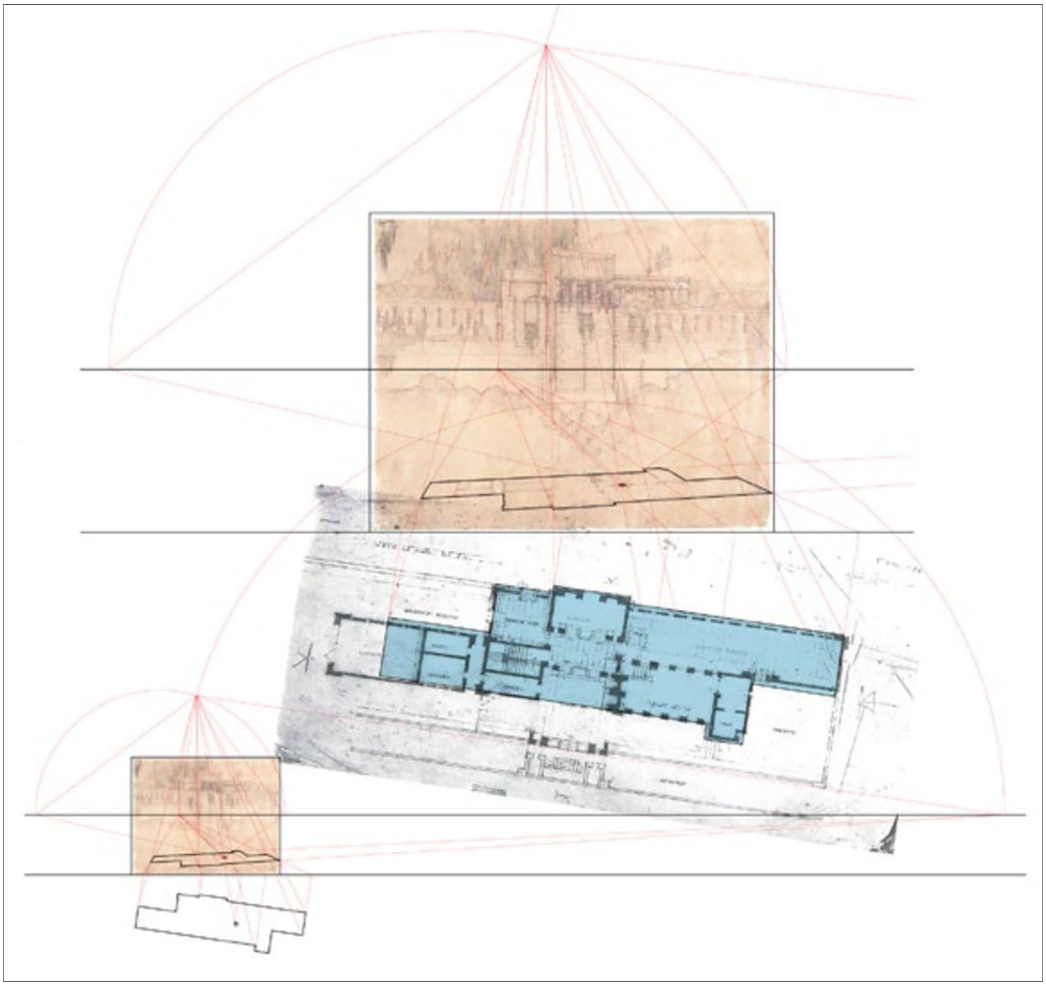


Fig. 03. F. L. Wright, *Doheny Ranch Project*, 1922, House A and digital analysis (C. Monteleone).

Arthur Dow was the first American artist to spread out Fenollosa's precepts on Japanese art in a practical manual [Dow 1899] which, according to critics, had a profound impact on Wright [Moffatt 1977, p. 60]. Dow explores some universal principles that can be derived from Japanese prints, basing on simple idea-lines. It is more or less a regular grid, that we can find in the preparatory sketch for the rendering of the Guggenheim Museum. Moreover, as happens in the Japanese prints, in which the artists draw trees and leaves to create an internal frame to deny the physical limit of an image, so Wright, sketching the skyscrapers of New York, used a similar device to negate the boundaries of the sheet, deceiving the observer who perceives the image as if he were actually immersed in it. Organizing the final image Wright used another expedient typical of Japanese prints, i.e. the omission of an environmental reference on the lower side, in this case he represented an unfinished outline of the cars with the result of apparently making the space flow below the observer, reinforcing his feeling of being in front of a real scene. Wright also loved the way Japanese artists depicted the apparent spatial depths, using different scales in representing the objects [De Rosa 1998, p. 46]. In the Guggenheim render it is possible to identify multiple layers at different scales: the area in front of the avenue, the museum and, finally, the surrounding buildings that are like artificial wings, positioned between the observer and the building to accentuate the depth of the scene. Another drawing made for the museum (fig. 05) has also a debt to a Japanese technic of representation: the *notan*. It is a graphic expedient described by Dow as the balance of light and dark tones [Dow 1899, p. 13]. The *notan* is the Japanese substitute for the theory of shade and shadows (fig. 06). In this rendering the surrounding reality is darkened, the black distinguishes the environmental context as well as the imposing masses

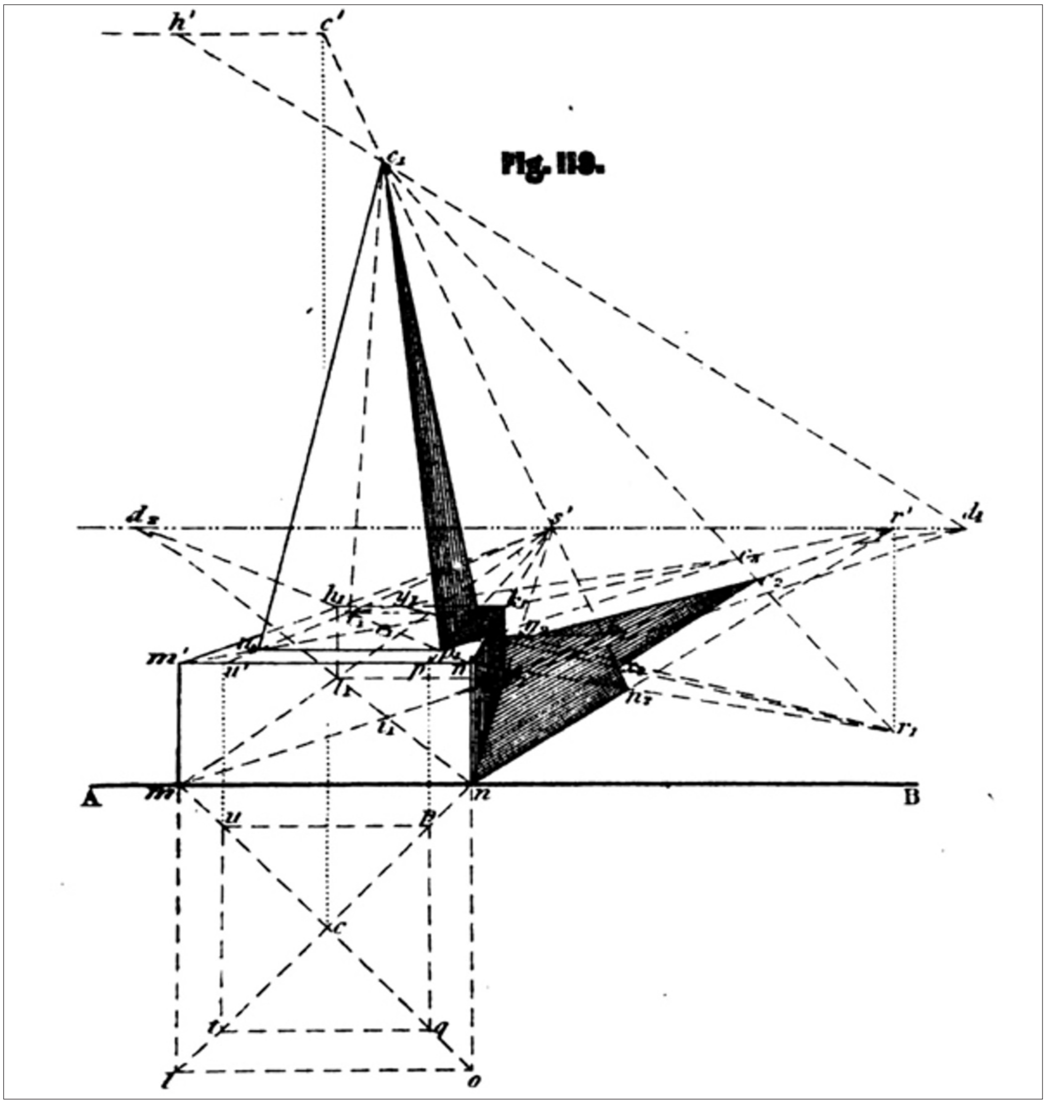


Fig. 04. A. E. Church, *Perspective drawing of a pyramid with its shade and shadow*, 1865.



Fig. 05. F. L. Wright, *Guggenheim Museum by Night*, 1943 (C. Monteleone).

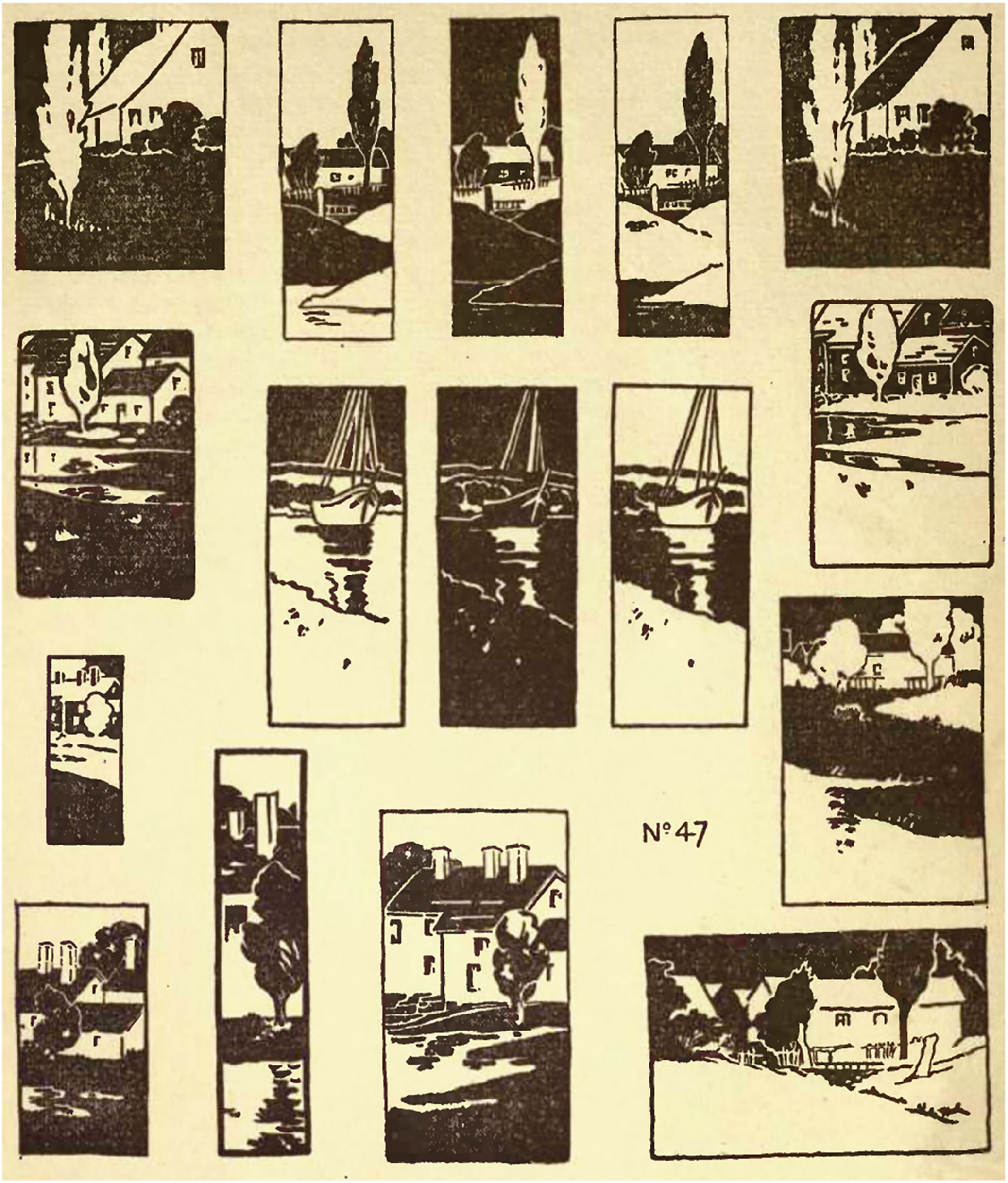


Fig. 06. A. Dow, *Composition,* 1899. Example of *notan.*

of the museum. On the other hand, the light, which is projected outside, illuminating shreds of the city, reveals an interior animated by human figures through the glasses.

Conclusion

Many books on Wright's architectural drawings have been published, some of them are mostly like catalogs with few or no comments on the images and the techniques. We have pushed these former analyses further. Wright mixed Western tradition of architectural representation with the rules of Japanese art composition, so that his drawings generate something new. The Master's attempt to create an original style in architectural drawings falls within the policy of regenerating and improving the American culture of the late XIX century. So, Wright's research of a new American architecture goes beyond the innovative design. He extended his interest in the field of representation, looking for a new inclusive, plural and democratic identity.

Notes

[1] Cosimo Monteleone is the author of *Abstract, Architectural Drawings as Bridge Between Different Cultures*, and *Conclusions*. Rachele Angela Bernardello is the author of *Melting Different Traditions of Representation.*

[2] In 1901 (February: *A Home in a Prairie Town*; July: *A Small House with Lots of Room in It*) Frank Lloyd Wright published the design of four houses on *Ladies' Home Journal*: Hickox, Bradley, Thomas, and Willits houses. These designs received the recognition as mature examples of Prairie Houses.

[3] It is first Wright's publication abroad and contains 100 lithographs of Wright's buildings from 1893-1909. The original title in German was *Ausgeführte Bauten und Entwürfe von Frank Lloyd Wright*, Berlin 1911, by the publisher Ernst Wasmuth.

References

Byrne, B. (1963). On Frank Lloyd Wright and His Atelier. In *AIA Journal*, n. 6, pp. 109-112.

Brunetti, F. (1980). *Le matrici di un'architettura organica. Frank Lloyd Wright*. Firenze: Alinea.

Church, A. E. (1865). *Elements of Descriptive Geometry with its application to Spherical Projections, Shades and Shadows,* Perspective and Isometric Projections. New York and Chicago: A. S. Barnes and Co.

De Rosa, A. (1998). *L'Infinito svelato allo sguardo. Forme della rappresentazione estremo-orientale*. Torino: CittàStudiEdizioni.

Dow, A. W. (1899). *Composition: A Series of Exercises Selected from a New System of Art Education*. Boston: J. M. Bowles.

Emerson, R. W. (1836). *Nature: Addresses and Lectures.* Boston and New York: Houghton, Mifflin and Co.

Fenollosa, E. F. (1893). *East and West*. Boston and New York: T. Y. Crowell and Co.

Hines, T. S. Jr. (1967). Frank Lloyd Wright – The Madison Years: Records versus Recollections. In *Journal of the Society of Architectural Historians,* n. 4, pp. 227-233.

Moffatt, F. C. (1977). *Arthur Wesley Dow (1857-1922)*. Washington DC: Smithsonian Institution Press.

Nute, K. (2000). *Frank Lloyd Wright and Japan: The Role of Traditional Japanese Art and Architecture in the Work of Frank Lloyd Wright*. London: Routledge.

Pfeiffer, B. B. (2009). Spaces for the display of Fine Art. In Spector N. (a cura di). *The Guggenheim: Frank Lloyd Wright and the Making of the Modern Museum,* pp. 119-.125. New York: Guggenheim Museum Publication.

Riley, T., Reed, P. (1994). *Frank Lloyd Wright. 1867-1959.* New York: The Museum of Modern Art.

Rubin, J. S. (2002). *Intimate Triangle: Architecture of Crystals, Frank Lloyd Wright, and the Froebel Kindergarten*. Alabama: Polycrystal Book Service.

Spencer, R. C. Jr. (1900). The Work of Frank Lloyd Wright. In *Architectural Review*, n. 6, pp. 61-74.

Authors
Rachele Angela Bernardello, Dipartimento ICEA, Università degli Studi di Padova, racheleangela.bernardello@phd.unipd.it
Cosimo Monteleone, Dipartimento ICEA, Università degli Studi di Padova, cosimo.monteleone@unipd.it

To cite this chapter: Bernardello Rachele Angela, Monteleone Cosimo (2022). A Bridge Between East and West: Frank Lloyd Wright's Drawing as Synthesis of Two Different Cultures. In Battini C., Bistagnino E. (a cura di). *Dialoghi. Visioni e visualità. Atti del 43° Convegno Internazionale dei Docenti delle Discipline della Rappresentazione/Dialogues. Visions and visuality. Proceedings of the 43rd Internationwal Conference of Representation Disciplines Teachers.* Milano: FrancoAngeli, pp. 145-152.

Copyright © 2022 by FrancoAngeli s.r.l. Milano, Italy

Isbn 9788835141938